General Patient Care Protocols:
Trauma Patient Assessment

Note Well: *To provide for the process of primary and secondary patient assessment in the trauma patient.*

I. Preliminary Considerations

1. Recognize environmental hazards to rescuers, and secure area for treatment.

2. Recognize hazard for patient, and protect from further injury.

3. Identify number of patients. Initiate a MCI / disaster plan if appropriate.

4. Observe position of patient, mechanism of injury, surroundings.

II. Initial Assessment

1. Airway

   A. Protect spine from movement in trauma victims. Provide continuous spinal stabilization.

   B. Observe the mouth and upper airway for air movement.

   C. Establish and maintain the airway.

   D. Look for evidence of upper airway problems such as vomitus, bleeding, facial trauma, absent gag reflex.

   E. Clear upper airway of mechanical obstruction as needed.

II. Initial Assessment (continued)

2. Breathing: Look, Listen and Feel

   A. Note respiratory rate, noise, and effort.

   B. Treat respiratory distress or arrest with oxygenation and ventilation.

   C. Observe skin color and mentation for signs of hypoxia.

   D. Expose chest and observe chest wall movement, as appropriate.

   E. Look for life-threatening respiratory problems and treat accordingly:
      i. Sucking chest wound
      ii. Large flail segment
      iii. Tension pneumothorax

3. Circulation

   A. Check pulse and begin CPR if no central pulse.

   B. Note pulse quality and rate; compare distal to central pulses as appropriate.

   C. Control hemorrhage by direct pressure.

> ***Note Well:*** *If needed, use elevation, pressure points; tourniquet **only** in extreme situations.*

   D. Check capillary refill time in fingertips.

   E. If evidence of shock or hypovolemia begin treatment according to shock protocols.

II. Initial Assessment (continued)

4. Responsiveness

   A. Note mental status (AVPU)
      i. **A**lert,
      ii. Responsive to **V**erbal stimuli
      iii. Responsive to **P**ainful stimuli
      iiii. **U**nresponsive

   B. Evaluate Glasgow Coma Score (GCS).

5. Determine "Load and Go" criteria for trauma patient

   A. Decreased level of consciousness

   B. Difficulty in breathing

   C. Absent distal pulses

   D. Unstable pelvis

   E. Bilateral femur fractures

   F. Penetrating trauma to the neck

   G. Penetrating trauma to the chest

   H. Uncontrolled hemorrhage

   J. Adult systolic blood pressure less than 90 mmHg

III. Detailed Assessment

1. Vital Signs

   A. Frequent monitoring of blood pressure, pulse, and respirations

   B. EKG monitoring as indicated

   C. Blood glucose measurement as indicated

   D. Pulse oximetry, as available and appropriate

2. Head and Face

   A. Observe and palpate for deformities, asymmetry, bleeding, tenderness, or crepitus.

   B. Recheck airway for potential obstruction
      i. Upper airway noises
      ii. Dentures
      iii. Bleeding
      iiii. Loose or avulsed teeth
      v. Vomitus
      vi. Absent gag reflex

   C. Eyes
      i. Pupils
         a. equal or unequal
         b. responsiveness to light
      ii. Foreign bodies
      iii. Contact lenses
      iiii. Raccoon eyes

   D. Ears
      i. Bleeding
      ii. Discharge
      iii. Bruising behind ears

III. Detailed Assessment (continued)

E. Breath
   i. Note any abnormal odor
      a. ETOH (*possible alcohol usage*)
      b. ketones (*possible diabetic*)
      c. bitter almond (*possible cyanide exposure*)
      d. garlic (*possible arsenic exposure*)

3. Neck

   A. Check for deformity, tenderness, tracheal deviation, wounds, jugular vein distention, use of neck muscles for respiration, altered voice, and medical alert tags.

   B. Maintain immobilization, if appropriate.

4. Chest

   A. Observe for wounds, air leak from wounds, symmetry of chest wall movement and use of accessory muscles.

   B. Palpate for tenderness, wounds, fractures, crepitus, or unequal rise of chest.

   C. Auscultate for crackles (wet sounds), wheezes, or decreased breath sounds.

5. Abdomen

   A. Observe for wounds, bruising, distention, or pregnancy.

   B. Palpate all four quadrants for tenderness, or rigidity.

6. Pelvis

   A. Palpate and compress lateral pelvic rims and symphysis pubis for tenderness or instability.

III. Detailed Exam (continued)

7. Extremities

   A. Observe for deformity, wounds, protruding bone ends, and symmetry.

   B. Palpate for tenderness, crepitus.

   C. Note distal pulses, skin color, and medical alert tags.

   D. Check sensation.

   E. Test for motor strength if no obvious fracture present.

   F. Ask to move extremities to check overall function.

8. Back

   A. Observe and palpate for wounds, fractures, tenderness, and bruising while maintaining spinal alignment.

IV. Special Considerations

1. Initial assessment should take 60-90 seconds or less in a medical patient or victim of minor trauma. In a multiple trauma patient, assessment and treatment of life-threatening injuries evaluated in the primary survey may require immediate intervention, with treatment and further assessment occurring while en route to the hospital.

2. In trauma patients, the spine should be stabilized during patient movement.

3. The detailed assessment should be accomplished while en route to the trauma center.

IV. Special Considerations (continued)

4. Be systematic.

5. Interruption of the secondary survey should only occur if the patient experiences airway, breathing or circulatory deterioration.

6. Obtain and record frequent vital signs and neurologic observations.

V. Normal Vital Signs

	Respirations	Pulse	Systolic BP*	Diastolic BP
Adult	12-20	60-100	90- 140	60-90
Adolescent	12-16	60-100	>90	
School-aged Child	18-30	70-120	>80	
Preschooler	22-34	80-140	>75	
Toddler	24-40	90-150	>70	
Infant	30-60	100-160	>60	

* For children above one year of age, you can determine the lower limit of an acceptable blood pressure using the following formula:
Minimal systolic blood pressure = 70 + (2 × age in years)

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